



# WASH in the control and elimination of schistosomiasis in sub-Saharan Africa

Yael Velleman Head of Partnerships, Schistosomiasis Control Initiative



## What is WASH?

• Increasing access to water supply for drinking and other domestic purposes; improving drinking water quality Water (usually not "big" water (dams, reservoirs) or water for productive purposes) • Access to and use of facilities and services for the safe disposal of human urine and faeces (but not other types of waste) • Safe sanitation system: "a system designed and used to separate Sanitation human excreta from human contact at all steps of the sanitation service chain (toilet capture and containment, emptying, transport, treatment and final disposal or end use" (WHO, 2018). Toilet ≠ Sanitation! Broadly: conditions and practices to maintain health and prevent disease Hygiene • The H within WASH tends to focus on maintaining personal cleanliness, and often narrowly on hand washing with soap.





## The importance of WASH for NTDs

The BEST Framework: A comprehensive approach towards Neglected Tropical Diseases







# The response

## Water Sanitation & Hygiene

for accelerating and sustaining progress on Neglected Tropical Diseases

a global strategy 2015–2020

# VISION

Accelerated and sustained achievement of the NTD roadmap milestones, particularly among the poorest and most vulnerable, through better targeted and joint WASH and NTD efforts.





investment, and track

progress.

Strengthen evidence on how to deliver effective

WASH interventions for NTD control and elimination and embed findings in guidance and practice.



Plan, deliver and evaluate WASH and NTDs

with mutual inputs from WASH, health and NTDs stakeholders at all levels.





World Health Organization



## Common goals – necessary starting point for collaboration

COMMON GOALS Health Shared prosperity and equity Sustainability







# The Response (2):

## Growing momentum, communities of practice

- 2012: NNN, Sydney initial discussions and joint publication; 1<sup>st</sup> international WASH and NTDs roundtable, Seattle followed by joint publication
- 2013: Brighton (WASH WG idea initiated); WASH and NTDs manual for WASH implementers
- 2014: 2<sup>nd</sup> roundtable, London; NNN, Paris WASH WG established
- 2015: NNN, Abu Dhabi momentum continued, WHO Global Strategy on WASH and NTDs launched, BEST announced
- 2016: NNN, BEST framework launched
- 2017: NTDs summit WASH and NTDs case study synthesis and indicators paper; NNN, Dakar
  - WASH and NTDs toolkit outlined
- 2018: 3<sup>rd</sup> Roundtable, Addis Ababa
- 2019: Launch of print and interactive WASH and NTDs toolkit





## **From rhetoric to practice**



# WASH and Health working together

A 'HOW-TO' GUIDE FOR NEGLECTED TROPICAL DISEASE PROGRAMMES







## Outline







## Context

- Justification & policy background
- The BEST Framework for NTDs
- WASH in Behaviour
- WASH in Environment
- WASH in Social inclusion
- WASH in Treatment & care



### Tools:

- Interventions for NTD control and care
- NTD-related behaviours
- Guide on understanding behaviours for developing behaviour change interventions







### Interventions for NTD control and care

Disease ►Type ►Transmission	Behaviour	Environment	Social inclusion	Treatment and care
Buruli ulcer • Bacterial • Environmental (undertermined)			<ul> <li>Addressing stigma due to disfigurement, disability and cultural beliefs regarding causes (e.g. witchcraft, curses)</li> <li>Inclusive WASH services for people with disabilities</li> </ul>	<ul> <li>Hygienic wound management</li> <li>Promotion of early diagnosis &amp; treatment</li> <li>Antibiotic treatment</li> <li>Surgery</li> <li>Physiotherapy and rehabilitation</li> <li>WASH for hygiene and infection prevention and control in healthcare facilities</li> </ul>
Chagas disease • Parasitic • Triatomine ('kissing') bug	<ul> <li>Food hygiene (washing hands, surfaces, utensils and raw food products with clean water and soap; thorough cooking/ reheating; safe food storage)</li> <li>Bed net use</li> </ul>	<ul> <li>Use of improved housing materials such as solid flooring and walls, and inorganic roofing materials</li> <li>Insecticide residual spraying</li> </ul>		<ul> <li>Chemotherapy</li> <li>Medical screening</li> <li>WASH for hygiene and infection prevention and control in healthcare facilities</li> </ul>
Chromoblastomy- cosis • Fungal • Environmental (soil, plants, flowers, wood)	<ul> <li>Use of personal protective equipment in occupation groups prone to exposure (farmers, labourers etc)</li> <li>Regular bathing with clean water and soap</li> <li>Improved nutrition</li> </ul>	<ul> <li>Increased access to improved water supplies for hygiene</li> </ul>	<ul> <li>Addressing stigma due to disfigurement</li> </ul>	<ul> <li>Early detection and surgical resection</li> <li>Cryotherapy (liquid nitrogen)</li> <li>Heat therapy</li> <li>Laser therapy</li> <li>Oral antifungal medication (not very effective)</li> <li>Topical (Imiquimod cream)</li> </ul>

### NTD-related behaviou<u>rs</u>

	Practice	P	Purpose	Disease	
	Always use a toilet for urination and defecation (avoid open defecation)		revent urine and faeces from ontaminating soil	Cysticercosis, Foodborne trematodes, Schistosomiasis, Soil	
			revent diseases	transmitted helminthiasis (STH), Trachoma, Yaws,	
		K	eep flies away from faeces		
	Always dispose of faeces (human or animal) in a toilet		revent faeces from contaminating pil	Cysticercosis, STH, Trachoma	
		В	reak cycle of spreading diseases		
		K	Keep flies away from faeces		
	Never urinate in an open water source such as a pond, river or dam		revent schistosomiasis eggs from etting back into water sources	Schistosomiasis	
	Keep the compound clear of	Т	o prevent disease	Cysticercosis, Dengue,	
	human feces.		o keep flies away from the nmediate living environment	Yaws	
ION	Keep compound clear of animal faeces		o prevent disease	Cysticercosis, Dengue,	
SANITAT			o keep flies away from the Personal hygiene	Echinococcosis, Schistosomiasis, STH Trachoma	
	Keep toilets, drains and septic ta covered		Wash hands at critical times	To prevent disease transmission	Echinococcosis, Schistosomiasis, STH, Trachoma
			Wash hands after contact with animals	To prevent hand to mouth ingestion of parasite eggs	Echinococcosis
			Wash face when dirty	To remove secretions from face	Trachoma
				To keep flies away from face	
			Bathe regularly using clean water and soap (and not in open water sources/ surface water)	Prevent skin/fungal infections	Chromoblastomicosis, Yaws
			Wash regularly cloths, towels and bedding (not in open water sources/surface water)	To prevent transmission through fomites	Trachoma
			Food hygiene		
			Do not serve children food directly on the ground	To prevent disease transmission	STH
	5	T	Maintain hygienic food preparation through washing hands, surfaces, utensils and raw food products with clean water and soap	To prevent pathogen contamination of food h	Chagas, Echinococcosis, Foodborne trematodes







# Setting the programme vision

- Getting started
- Setting the programme visior
- Identifying initial barriers and challenges to collaboration









- Why collaborate?
- How to collaborate?
- Where to start?
- Quick 'wins'

MPROVING HEALTH

## Tools:

- Messages for engagement (advocacy messages)
- Cross sector meeting annotated agenda and PowerPoint template





#### WASH and NTD Stakeholders Meeting Agenda

#### Date

Time	Session	Presenter/Facilitator				
ARRIVAL & REGISTRATION						
5 minutes	<b>Opening Remarks</b> a. Objectives b. Background	Host				
10 minutes	Official Opening: NTDs and link with WASH and other sectors	National NTDs Coordinator, MoH/ senior WASH partner				
45 minutes	Stakeholder presentations on current	WHO or UNICEF person if possible				
	programming priorities (WASH, Education, and Health Promotion)	Representative from Education and Health Promotion				
30 minutes	Group discussion to list opportunities and activities	Facilitator				
COFFEE BR	EAK					
60 minutes	Continued Group discussion to list opportunities and activities	Facilitator				
45 minutes	Key action points and next steps (including future meetings)	Facilitator/ host				
15 minutes	Closing remarks	NTD coordinator/ senior WASH partner				
LUNCH/end of day (depending on whether meeting starts in the morning or after lunch)						

#### **Meeting objectives**

- ightarrow Understand the current programmes and activities in NTDs and other key sectors
- ightarrow Identify areas of converging interests and areas of work and joint planning opportunities
- ightarrow Identify specific joint or coordinated activities



## Priority NTDs in [country] and their link with WASH

Disease	WASH for transmission control	WASH for treatment & care
Yaws	√	$\checkmark$
Leprosy		$\checkmark$
Lymphatic filariasis	√	$\checkmark$
Schistosomiasis	$\checkmark$	
Soil-transmitted helminths	√	
Trachoma	√	$\checkmark$

<<Insert simplified table depending on your country's disease profile>>









## **Analysing the situation**

- Justification
- Key steps for conducting a joint situation analysis for planning

### Tools:

- Situation analysis protocol
- Terms of reference for SA team
- SA Executive Summary template
- SA presentation template
- WASH NTDs partner form





tosomiasis ol Initiative

### Situation analysis executive summary template

#### Purpose

Outline the purpose/objectives for the situation analysis (e.g. to support the development of an integrated/coordinated disease control programme)

#### Methods

- $\rightarrow~$  Describe the methods used for the analysis, such as document reviews, consultation workshops, interviews and field visits
- → Outline the constituencies of stakeholders involved in the analysis (government, NGO, specific sectors etc.)
- ightarrow Outline the key areas and topics of investigation
- ightarrow Set out how the findings will be used

#### **Key findings**

- ightarrow Data: Demographic, disease and WASH information
- → Current challenges for WASH-NTDs integration and collaboration: Who are the primary and key implementation actors? What are the key coordination overlaps, synergies and gaps? Based on the available mapping exercises, where are the priority intervention areas?
- ightarrow Behaviour change tools and approaches, Media channels, Advocacy
- ightarrow Are there aspects on which information/formative research is still required?
- $\rightarrow$  Key issues underpinning disease prevalence and programming in the country:

#### **Key opportunities**

- → Technical/programmatic (e.g. features of existing or planned programmes that enable integration/coordination; opportunities for new approaches and innovation)
- → Financial (opportunities to increase domestic or external funding, improve financial management, any health or WASH system strengthening initiatives for improving absorptive capacity and spending)
- → Coordination (forthcoming policy or strategy reviews, new coordination initiatives, existing coordination structures that can be further strengthened or utilised)

#### **Recommendations**

1.	
2.	
3.	
4.	
5.	
6.	
7.	

Theme	Key problem/challenge to address
Behaviour	<ul> <li>(e.g. poor hygiene practices – lack of handwashing with soap, lack of face washing, lack of shoe wearing)</li> </ul>
Environment	<ul> <li>(e.g. Lack of access to and use of toilets; Vector breeding near/in poorly managed water sources; Poor maintenance of sanitation facilities)</li> </ul>
Social inclusion	<ul> <li>(e.g. Stigma-related exclusion from water sources (e.g. for people affected by certain NTDs))</li> </ul>
Treatment and care	<ul> <li>(e.g. lack of reliable water supply in healthcare facilities providing surgical interventions; lack of water for self-care)</li> </ul>



## Planning & Programme Design

- Practical planning steps
- Important tips for adaptive action planning
- Financial arrangements for a successful intersectoral programme
- What does 'WASH funding' mean?

#### Tools:

- Planning tool
- Agenda for planning workshop
- Problem analysis approaches
- Planning for Elimination: getting NTD
   programmes across the finish line

and resolution

- Budget items and checklist
- Improving coordination in low-resource settings



Do



### Planning tool: developing comprehensive and adaptive NTD programmes

#### **BEFORE A PLANNING WORKSHOP IS ORGANISED**

1. Gather:

The purpose of this step is to use the information gathered so far to set out a clear idea of the problems the programme needs to address, and which institutions and individuals to involve in order to develop a successful plan of action.

#### IN THE PLANNING WORKSHOP

2. Synthesise:

This phase focuses on creating a shared understanding of the key problems/issues the joint programme will be designed to address, and how existing programmes and interventions relate (or not) to the problems.

**3. Align** (with the defined priorities):

The purpose of this step is to identify what can be done practically, by whom and when, making sure all actions are realistic and achievable, and to identify which aspects are not currently being addressed through existing interventions. The purpose of this exercise is not to criticise existing activities but to make strategic choices on what will work best to achieve the shared vision. Participants may feel defensive if they feel their work is being criticised. They should be encouraged to reflect on lessons from implementation and be willing to adapt interventions to benefit the goal – as it may just be the case that the interventions are either not relevant to the NTD programme, or that they should be adapted in a way that improves their impact for the joint programme.

**4.** Act:

In this step, you will jointly prioritise interventions, and take the necessary actions based on the results of the previous step.

5. Verify:

This crucial step involves agreeing the key interventions that will be taken forward, in the form of a one-year plan.

#### **AFTER THE WORKSHOP**

6. Revisit and realign

This step is an important aspect of adaptive planning, as set out in <sup>(2)</sup> Step 4 of the toolkit. as it allows to review progress within a relatively short timeframe during implementation to identify challenges and make necessary adjustments to the plan.







# Implement, monitor & evaluate, adapt

- Key components of implementation, monitoring and evaluation
- Getting your M&E framework right

## Tools:

- Routine supervision form
- Programme dashboard template
- Gantt chart template
- Programme risk analysis template
- Template logframe & indicator menu
- Definitions & checklist for logframe development







### WASH NTD Logframe template

OBJECTIVES	INDICATORS	MILESTON Baseline	MILESTONES Baseline			MEANS OF VERIFICATION	ASSUMPTIONS
		Baseline	Milestone 1	Milestone 2	Endline		
GOAL (IMPACT	-)						
		Sources					
Process outcom	ies						
Outcome PX							
Output px.1							
Output px.2							
		Sources					
Community Ou	tcomes [Water]						
Outcome WX							
Output wx.1							
Output wx.2							
		Sources					
School Outcom	es [Water]						
Outcome WX							
Output wx.1							
Output wx.2							
		Sources					
Healthcare Faci	lity Outcomes [Wate	er]					
Outcome WX							
Output wx.1							
Output wx.2							
		Sources					
Community Out	tcomes [Sanitation]						1
Outcome SX							
Output sx.1							
Output sx.2							
		Sources					
School Outcom	es [Sanitation]						
Outcome SX							
Output sx.1							
Output ev 2							
output 5x.2		Sources					
Hoolthcaro Faci	lity Outcomes [Senit	sources					
Healthcare Faci	ary outcomes [Sann	เลเเบท					

#### Programme dashboard template

#### COUNTRY: ...

[Insert key information on NTDs in your country. If available, insert maps showing disease prevalence and/or co-endemicity as in the example below from Ethiopia]

Disease	# endemic districts/ % prevalence	Population at risk
STH		
Schistosomiasis		
LF		



#### Other figures:

NTD-related disability Number of cases of other NTDs of interest Map credit: Ethiopia Federal Ministry of lealth – Neglected Tropical Diseases lection, and Hygiene and Environmental lealth Section.

#### Transmission/ implementation context

[Insert key information on determinants and broader impact of NTDs, such as access to water and sanitation services or trends in access, undernutrition trends, poverty indices etc]

#### Access to drinking water







## http://apps.who.int/wash-health-toolkit/





## It can be done!

- Trachoma:
  - Urgency towards 2020
  - SAFE strategy
  - Programmes implementing and reporting on 'full SAFE'
  - WASH implementers part of the delivery mechanism
  - Movement towards true partnership to sustain low levels of endemicity
  - Progress remains uneven and uncertain pressure must be sustained



SSABIN

WATER, SANITATION AND HYGIENE TO COMBAT NEGLECTED TROPICAL DISEASES INITIAL LESSONS FROM PROJECT IMPLEMENTATION



Access to water, sanitation and hygiene is fundamental for health. It plays a critical role the prevention and management of diseases including neglected tropical diseases which affect over 1 billion people among the poorest communities. WASH is one of five public health interventions to control NTDs. While NTD control efforts have achieved considerable success through mass drug administration campaigns, for many diseases, WASH remains essential to limit or break the transmission cycle.



WHO released a Global Strategy<sup>1</sup> calling for closer coordination of WASH and NTD programmes to improve the lives of populations affected by NTDs: This may be done through joint planning delivery and evaluation of programmes, strengthening the evidence, and making better use of endemicity data to target WASH services to the most vulnerable, underserved populations.

Examples of successful intersectoral collaboration exist. The guinea worm eradication campaign which involved implementation of a package of medical, water and education interventions<sup>1</sup> is one of the most cited examples. There are also many success stortes with trachoma's SAFE strategy. Last year, Morocco received validation of elimination of trachoma as a public health problem, which resulted from comprehensive implementation of all four components of the SAFE strategy<sup>1</sup>.

Many WASH and NTD actors have started to work together on the planning and implementation of their projects and have documented their experiences and lessons learnt. This paper draws on examples from eighteen countries to summarize emerging successes and challenges.

#### Overview

Country examples were solicited from implementers using a template driculated through WHO and the NID NOD networks. Case studies were primarily submitted from NGS, but also from multitateral agencies and government. On the ground, collaboration meant a variety of activities including targeting providen of NASH services to NTD endemic areas, including targeting providen of NASH services to NTD endemic areas, including targeting providen of NID staff and vice versa, promoting safer WASH practices during mass drug administration campaigns, or including NTD specific messages in household or schoolbased WASH activities. Some Implementers reported positive outcomes of their programmes including reduced disease prevalence, cors-awings, increased coverage of mass drug administration, Improved disease surveillance and health promotion, increased coverage of WASH services and safer WASH behavious.





# What does this mean for schistosomiasis control & elimination in the African context?

# How can information be better-used for decision making and planning?

## → A potential approach for SCI and partners





## Why we need a SCH-specific WASH approach

- WASH known as crucial to prevention, control and eventual elimination of schistosomiasis, **but**:
  - which interventions are required to achieve the necessary levels of access to infrastructure?
  - What are the most effective behaviour change approaches?
- Challenges:
  - complex epidemiological profile and transmission cycle of schistosomiasis
  - highly focal nature of disease distribution
  - variation in transmission contexts for various schistosome species (and hybrids)

 $\rightarrow$  A 'blueprint' WASH approach that does not respond to the specific local context is unlikely to result in uptake and use of infrastructure and in sufficient shifts in behavioural practices, and consequently unlikely to deliver and sustain results in disease reduction.

















## What is needed

- A viable intervention 'package' for schistosomiasis control and elimination:
  - Context-relevant interventions to inform programme design, collaboration across sectors, and policy.
  - Identify common objectives with other disease control and public health programmes and entry points for collaboration, coordination and integration.





## **Approach components and considerations**

- Community/setting 'type': What are the main characteristics of this specific transmission context that impact the transmission of schistosomiasis?
  - type of community (size, rural vs urban, temporary vs permanent),
  - o the dominant schistosome species,
  - the environmental and ecological context,
  - socio-economic conditions (social composition, family structures, economic activity relevant to schistosomiasis, housing and infrastructure, income level) and
  - other infectious diseases linked with similar environmental and social conditions that are likely to be present in this context.
- Behavioural context:
  - **Exposing behaviour** (exposing oneself (or one's child) through contact with contaminated water)
  - Transmitting behaviour (excreting into the environment/water leading to risk of transmission to others).





## **Process for determining the intervention package**

Sanitation systems and technologies

#### Levels of access incl. functionality & use

Water supply technologies/systems

- Use types: drinking, domestic, productive, recreation
- Sustainability: availability of technology & parts, ability to deliver cost effective, longterm services
- User preferences

MPROVING HEALTH

- Location/convenience and yield of potential groundwater
- Demand from local resellers and local water and sanitation agencies
- Current water treatment strategies
- Water source management structures at the community and district level

- Entire sanitation service chain toilet-containment-transportationtreatment/end use
- Physical factors: population density, risk to groundwater used for drinking, water availability, soil hardness (re excavation), soil permeability, land availability
- Enabling factors: HR & Financial capacity for infrastructure and O&M
- Social factors: end use requirements, cultural preferences, ability/willingness to pay for initial hardware, possible level of service, legal
- National sanitation technology standards
- Treatment performance

#### Behaviour change approach:

- Behaviour context: Livelihoods, Culture, preferences, ability/ willingness to pay, gender, age
- Applicability context: programme entry point, suitability, barriers to behaviour change
- Existing behaviour change interventions at the community, school or population level
- Availability of formative information or ability to obtain it (for use in the design of behaviour change interventions)



## Caveats

- A blunt instrument, allowing programme planners/advisers and policy influencers a greater degree of accuracy in the programme development stage. Detailed programme design, budgeting and implementation must still be based on a robust location-specific needs assessment and feasibility study.
- Some population groups may alternate regularly between setting 'types'. For example, people usually
  residing in permanent rural or urban settings (#5) may move regularly between this setting and
  permanent fishing camps (#2) or undertake seasonal migration for grazing purposes (#4).
- The community/setting types encompass contexts in countries which SCI supports, and is therefore restricted to schistosomiasis-endemic contexts in Africa.
- Should be used to inform coordination with agencies and government departments who deliver WASH interventions, and assist joint planning processes with the objective to enhance the targeting of WASH services to endemic communities.







- 1. Fishing (itinerant)
- 2. Fishing (permanent)
- 3. Irrigated agriculture
- 4. Nomadic
- 5. Static rural/peri-urban





## Sample snapshot – 'Type' 1

1 Eiching (itinorant)

1. Fishing (inneranc)						
Species: M						
Environmental setting: Lakes, large water bodies						
Socio-economic aspects (ATP: ability to pay for HH s	sanitation; WTP: willingness	to pay for HH sanitation)				
• Temporary; No legal 'community' status or land	l ownership by community i	residents; Lack of commur	nity cohesion due to transient nature (can			
undermine community-led approaches)						
• Poor housing, usually no toilets $ ightarrow$ open defeca	tion likely					
• Possible migrant pop. (e.g. DRC $\leftrightarrow$ Uganda)						
<ul> <li>Families may or may not be present</li> </ul>						
• School-aged children (SAC) may not be at school	ol (i.e. missed by both treatr	ment and health educatior	n)			
ATP/WTP: assumed low						
Likely co-endemicity: Cholera, STH, Malaria, LF						
Exposing behaviours: [behavioural targets]		Transmitting behaviours	s: [behavioural targets]			
• Entering water (in the shallows) for fishing/ dor	mestic activities, or for use	Anal cleansing in/nr surface water [All community members]				
as toilet [fishermen, fishing households]		Open defecation in/near water [All community members]				
<ul> <li>Recreational swimming [children]</li> </ul>		Washing soiled clothing in surface water [All community members]				
Drinking/domestic water supply:	Sanitation		Behaviour change			
• Increasing quality, functionality and capacity	Subsidised technology:		Exposing:			
of existing systems	- Container-based sani	tation (subscription	• Water storage and/or treatment to allow for			
Increasing access to additional infrastructure	service) If the emptyi	ng can become a	die-off			
for bathing and laundry	business for re-use in	agriculture	Recreation: Identification of a designated			
• Encouraging water vendors who source water	<ul> <li>Raised EcoSan – depert</li> </ul>	endent on market for	(relatively) safer swimming area within the			
from cercariae-contaminated water bodies to	excreta/urine (suitab	le for rocky soil)	same lake/river, or alternative area			
treat the water before distribution in	<ul> <li>Must be subsidis</li> </ul>	ed	Consider promotion of soap/endod for			
containers	<ul> <li>Linked with busir</li> </ul>	ness model	bathing			
Technologies:	<ul> <li>Accompanied by</li> </ul>	BC for management	Promotion of PPE for fishermen			
<ul> <li>Low-cost/high yield: spring protection,</li> </ul>	- Public facilities with a	ffordable fees (with	Transmitting:			
hand dug protected well	offsite treatment or c	Mobilisation and promotion activities to				
<ul> <li>Medium cost/yield: protected hand-dug</li> </ul>	a basic septic tank with a leachpit for encourage uptake of toilets, bathing and					
well, tube well, borehole + hand pump	evaporation and infilt	tration.)	laundry facilities.			
Other: Jetty construction into the water (if there's						
no vegetation inside the lake and if no deep water						
snails are present); Vegetation clearing from						
shores/banks						





## Next steps

 $\rightarrow$  Embed as part of our offer to Ministries of Health – help to facilitate local-level, 'sensible' planning processes

HEALTH













## Thank you for listening!

schisto.org 🖪 🎔 💿 🗈 in 🕇